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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/827,947 | 04/06/2001 | Gavin D. Hartigan | M00A214 | 6677 |

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THE BOC GROUP INC
100 MOUNTAIN AVENUE
MURRAY HILL
NEW PROVIDENCE, NJ 07974-2064

EXAMINER

POLITZER, JAY L

ART UNIT PAPER NUMBER

2856

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/827,947

Applicant(s)
Hartigan et al

Examiner
Jay Politzer

Art Unit
2856



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 6, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Serial Number: 09/80,947

Art Unit: 2856

Title: METHOD AND SYSTEM FOR LIQUEFACTION MONITORING

Filed: 4/6/01

Inventor(s): Hartigan et al

DETAILED ACTION

REJECTIONS UNDER 35 U.S.C. § 112:

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12 and 20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example:

Regarding Claim 12; what is a dead-ended connection?

What is a flow-through connection?

Regarding Claim 20; what is "selectively movable" and how is it accomplished?

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 11 and 25-26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Serial Number: 09/ ,947
Art Unit: 2856

Regarding Claim 11; it is unclear how these circuits are constructed.

Regarding Claims 25-26; are not described in the specification. To add this information would represent new matter.

REJECTIONS OVER PRIOR ART UNDER 35 U.S.C. § 103:

5. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

6. Claims 1-10, 13-19, 21-24 and 27 are rejected under 35 U.S.C. § 103 as being unpatentable over Mostowy et al '998, hereinafter Mostowy in view of Schaum.

Regarding Claims 1-5, 22 and 27; at Col 2, Li 51-60 Mostowy teaches a temperature sensor and a pressure sensor for monitoring a gas piping system and a computer at Col 7, Li 23-29 for processing the data and reporting results. Mostowy fails to provide a

reference data set. In Fig 4-2, Schaum teaches a reference data set that shows pressures and temperatures where a gas is liquid, above curve 2-C and pressures and temperatures where a gas is gaseous, below curve 2-C. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Schaum's reference data set to predict the onset of liquefaction because if liquefaction occurs, pumping becomes more difficult.

Regarding Claims 6-7; Mostowy fails to teach tolerance level data sets and a means to compare measured readings with these data sets. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide tolerance level data sets to provide warning of imminent liquefaction so that there is time for corrective action.

Regarding Claims 8 and 14; it would have been obvious to one of ordinary skill in the art at the time of the invention to calculate and report temperature and pressure margins to further indicate how much departures from measured values could be tolerated before liquefaction.

Regarding Claim 9-10, 16, 18 and 23; in the abstract Mostowy teaches a temperature sensor and a pressure sensor for monitoring a gas piping system and a computer for processing the data and reporting results. Mostowy fails to provide a reference data set. In Fig 4-2, Schaum teaches a reference data set that shows pressures and temperatures where a gas is liquid, above curve 2-C and pressures and temperatures where a gas is gaseous, below curve 2-C. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Schaum's reference data set to predict the onset of liquefaction because if liquefaction occurs, pumping becomes more difficult. Mostowy fails to teach tolerance level data sets and a means to compare measured readings with these data sets. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide tolerance level data sets to provide warning of imminent liquefaction so that there is time for corrective action. A housing is obvious to protect the apparatus from the elements.

Regarding Claims 13 and 17; these are all obvious functions performed by the computer.

Serial Number: 09/8 947
Art Unit: 2856

Regarding Claim 15; a housing is obvious to protect the apparatus from the elements.

Regarding Claim 19; the computer is without further limitation a general purpose computer that readily accepts data for any kind of gas.

Regarding Claim 21; it is obvious to have a plurality of distributed units. Duplicating the components of a device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Regarding Claim 24; it is obvious to deliver data to the location that it is needed.

DESCRIPTION OF UNAPPLIED ART:

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because it teaches other aspects of the disclosure.

INQUIRIES:

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Jay L. Politzer whose telephone number is (703) 305-4930 and whose facsimile number is (703) 308-7382
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Hezron E. Williams, can be reached at (703) 305-4705.
10. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.

Serial Number: 09/ ,947
Art Unit: 2856

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HELEN KWOK
PRIMARY EXAMINER

Helen Kwok